

The Royal University of Bhutan
Paro College of Education
Paro: Bhutan
Semester End Examination-2014

B.Ed(S) II - Introduction to Scripting (ICT205)

Full Marks: 100

Time: 3 hours

Instruction:

- Do not write for the first 10 minutes. This time is to be spent in reading the questions. The question paper consists of two sections - A and B. You must read the questions carefully and ensure how many questions are required to answer from each section.
 - Create a folder on the desktop with your student ID number as the folder name and save all your files inside this folder.
 - Make sure to save your document after every five minutes.
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Section A (20 marks)

Instruction:

- This section consists of objective type question. Each question has four responses. Choose the correct option.
- Save all the answer for this section in a doc file.
 - e.g. Section-A _a: answer

Question 1

- a) You can position a new window on screen by setting the
 - A. width and height properties
 - B. left and right properties
 - C. resizable property
 - D. status property
- b) What part of JavaScript reacts to someone clicking a button on a form displayed by your JavaScript?
 - A. Main
 - B. Event handler
 - C. Variable
 - D. Property

- c) In the expression $1+1$, what part of the expression is the plus sign?
- A. Operand
 - B. Operator
 - C. Modulus
 - D. Incrementer
- d) Which of the following rules would create a heading that is not currently visible in the page?
- A. `h1{display:none;}`
 - B. `h1{visibility:invisible;}`
 - C. `h1{style:invisible;}`
 - D. `h1{display:bold;}`
- e) What does value of false in the third parameter of the `addEventListener()` function indicate?
- A. Sets to event capturing
 - B. Sets to event bubbling
 - C. Sets event target
 - D. None of the above
- f) Which one of the following Number Object Methods will round the number to the specified number of decimal?
- A. `toRoundUp()`;
 - B. `toString()`;
 - C. `toPrecision()`;
 - D. `toFixed()`;
- g) What must be created before your customized object's properties and methods can be used?
- A. Number for reference
 - B. Create an array
 - C. An instance of an object
 - D. Object need to be set
- h) Which of the following is syntactically correct way to access any element of form object?
- A. `document.forms.element`
 - B. `document[0].forms.element`
 - C. `document.forms[0].element`
 - D. `document.forms[0].elements[0]`

- i) Which one of the following is not true about document object in JavaScript?
- A. It may contain array of forms object.
 - B. We can reference the forms object from document object using name.
 - C. A document object always keeps single form object.
 - D. Position of first forms object begins from zero.

- j) What will be the output of the following code, when x=30, y=45?

```
var i=j=10;
    if(x<100){
        if(y<50){
            ++i;
        }else{
            j++;
        }
    }
```

- A. i=11; j=11
 - B. i=10; j=10
 - C. i=11; j=10
 - D. i=10; j=11
- k) Evaluate this expression: `30 < 20 ? "win" : "lose"`.
- A. Win
 - B. 20
 - C. Lose
 - D. 30
- l) Assuming an array called birds has already been created (sparrow, hummingbird, eagle, crow), how do you set new element with value "robin" at the initial position?
- A. `birds.push("robin");`
 - B. `birds.pop("robin");`
 - C. `birds.shift("robin");`
 - D. `birds.unshift("robin");`
- m) Which one of the following statement is not legal?
- A. `x = x + 1;`
 - B. `y = 5 + 6;`
 - C. `23 = 3 + x;`
 - D. `j + = 45;`

n) In the list below, which is not a JavaScript object?

- A. Navigator
- B. Screen
- C. Axis
- D. Location

o) Consider the following code snippet :

```
var scope = "global scope";
function checkscope() {
  var scope = "local scope";
  function f()
  {
    return scope;
  }
  return f;
}
```

What is the function of the above code snippet?

- A. Returns value null
- B. Returns exception
- C. Returns the value in scope
- D. None of the above

p) Which is not a reserved word in JavaScript?

- A. Program
- B. Short
- C. Interface
- D. Throws

q) The foreground color of a document is a type of

- A. variable
- B. method
- C. property
- D. object

r) Within a loop, what does the break statement do?

- A. Starts a loop over
- B. Crashes computer
- C. Escapes the loop entirely
- D. Crashes browser

- s) Which one of the following statement is true?
- A. The `charAt()` method returns a numeric value that is the position of a character sent as a parameter.
 - B. The `split()` method creates a new string by removing a portion of the string and returning the string minus the portion removed
 - C. The `indexOf()` method returns a numeric value that is the position of a character sent as a parameter, but only the position of the first occurrence of that character.
 - D. The `length` property allows you to add longer properties and methods to the string object.
- t) Which JavaScript keyword is used to create the instance of an object?
- A. `var`
 - B. `instance`
 - C. `new`
 - D. `instance`

Section B (80 Marks)

Instruction:

- Answer all the questions from this section:
- Save all your section B answer as an html file with the file name as shown below:
 - e.g. Section-B_2.html
- If you have an external JS file or CSS file, then it should be linked to html file and save as shown below:
 - Section-B_2.js or Section_B_2.css

Question 2

Define a JavaScript function called `reverser()` that prompts user for a string; then computes the reversal of a string and displays the second last character of the reversed string.

[10]

Question 3

Write down JavaScript code that displays number 1, 2, 3, 4, 6, 7, 8, 10 on the screen using while loop.

[10]

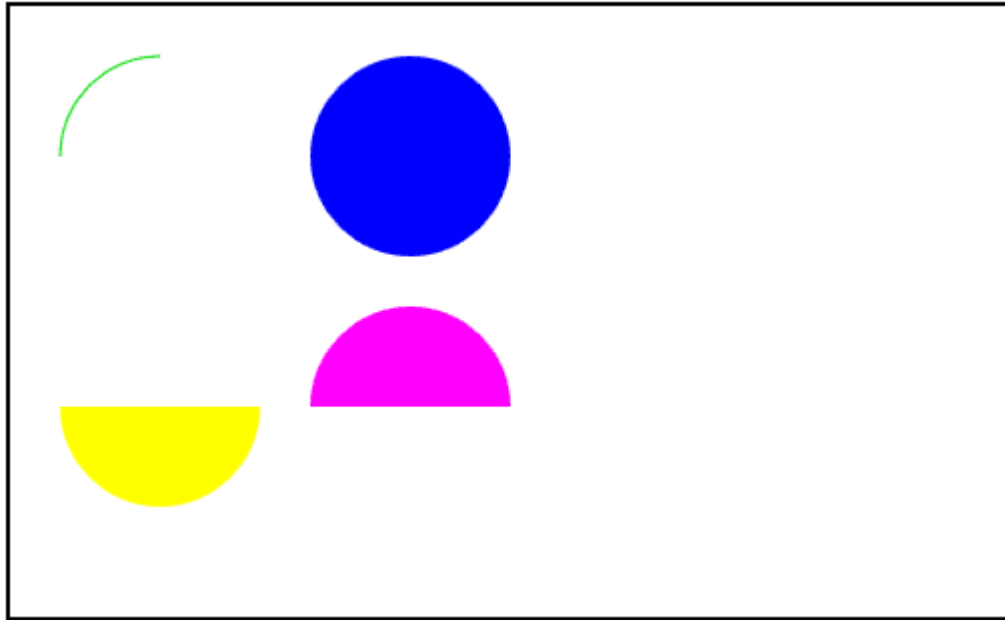
Question 4

Complete the following HTML and JavaScript code to create functional digital clock. [10]

```
<html>
<head><title>clock</title>
<script type="text/JavaScript">
function timing(){
    var Today=new Date();
    var min=Today.getMinutes();
    var .....=Today.getSeconds();
    var hr=Today.getHours();
    var prt=" Time:"+ hr+": " +.....+": "+sec;
    document.....dema.value=.....;
    ..... running=setTimeout(....., "1000");
}
</script></head>
<body bgcolor="green" ..... >
<form name="sonam">
    <input type="text" name="....." size="20">
</form>
</body>
</html>
```

Question 5

Write JavaScript code to draw the shapes as shown below. The figure should be in following colours. (Stroke arc-green, circle-blue, semi-circle-yellow and inverted semi-circle-pink) [10]



Question 6

Creating custom object

[10]

- Create an object named *computer* that has three properties named *speed*, *hdspace* and *ram*.
- Create function named *get_price()* that calculates the price of a computer. Set the base price of the computer to Nu. 25000 and assign it to variable *the_price*. If the hard disk space is greater than 100 GB, add Nu. 50 to the value of *the_price*; otherwise add Nu.25 to *the_price*.
- Add the function created in ii (above) to the computer object as its method.
- Create an instance of the computer object and name it *work_computer*. Send the string values of 2GHZ for the *speed* parameter, 40 GB for *hdspace* and 1GB for *ram*.

Question 7

Write a JavaScript Code that displays today's date in the format exactly given below. [10]

Wednesday, 12 November 2014.

Question 8

What is wrong with the following code? How would you fix it make cross-browser script? [10]

```
<html><head>
    <style>
        #myDIV {
            background-color: coral;
            border: 1px solid;
            padding: 50px;
            color: white;
        }
    </style></head>
<body>
<div id="myDIV">This div element has an onmousemove event
handler that displays a random number every time you move your
mouse inside this orange field.
<p>Click the button to remove the DIV's event handler.</p>
<form>
<input type="button" onclick="removeHandler()" id="Btn"
value="stop">
    </form>
</div>
    <p id="demo"></p>
<script>
document.getElementById().addEventListener("mousemove",
myFunction);

function myFunction() {
    document.getElementById("demo").innerHTML = Math.random();
}

function removeHandler() {

    }
</script>
</body></html>
```

Question 9

Create an HTML file and insert three images inside it. Attach JavaScript code that would enlarge the image when it is double clicked and reduce it to original size when clicked again. [10]